

REMARKS

Claims 9-10 and 12 have been canceled.

Claims 15-25 have been withdrawn from further consideration as being drawn to a non-elected invention.

Claims 1-3, 7, 11 and 13 have been amended.

Claim 26 and 27 have been added.

Claims 1-8, 11, and 13-27 are pending.

Election/Restrictions

The Office Action required a restriction of one of the following inventions under 35 U.S.C. 121:

- I. Claim 21 is drawn to the combination of a brace comprising a temperature pad.

- II. Claims 1-20 and 22-25 are drawn to the subcombination of a brace comprising a thermally conductive sheet, a temperature controller or a temperature control circuit.

The Office Action stated that the inventions are distinct because the inventions of Group I and Group II are related as combination and subcombination. The Office Action further states that the inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the claims of the subcombination require either a thermally conductive sheet, a temperature controller, or a temperature control circuit. The subcombination has a separate utility such as temperature regulating devices.

Furthermore, if Application chooses group II, Applicant is required to further elect between the subcombinations as defined below.

- III. Claims 1-14, drawn to an orthopaedic brace comprising a thermally conductive sheet, classified in class 219, subclass 529.
- IV. Claims 15-20, drawn to a back brace comprising a temperature pas and a temperature controller, classified in class 2, subclass 92.
- V. Claim 22, drawn to a self-contained heating and cooling kit, classified in class 62, subclass 3.5.
- VI. Claims 23-25, drawn to a temperature control circuit, classified in class 62, subclass 98.

The Office Action states that the inventions of Group III, Group IV, Group V and Group VI are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be

separately usable. In the instant case, the invention of the subcombination has a separate utility such as follows. Group III can be used as an electric blanket or warming pad. Group IV can be used as a body comforter or back protector. Group V can be used as a device which uses an electrical effect to produce both a heating and cooling treatment such as a flexible heat exchanger material. Group VI can be used as a device which supplies an electrical current in a localized manner such as a temperature control circuit in a circulation warmer.

Through a telephonic communication on November 9, Attorney for Applicant, Greg O'Bradovich, provisionally elected Group III, Claims 1-14 with traverse.

Applicant respectfully traverses the restriction with respect to Groups I-V. Groups I-V all consistently claim orthopaedic braces that contain some sort of self heating and cooling devices, but simply present different limitations starting with the independent claims in the Groups. Applicant respectfully points out that the preambles are also presented quite differently, but once the limitations are read, Applicant submits that the limitations clearly all relate to orthopaedic braces having similar self heating and cooling devices. Applicant does see the merit in restricting the temperature control circuit of Group VI from the other groups. However, Applicant respectfully requests that the other restrictions be withdrawn and that Applicant has the opportunity to amend the claims of the non-elected groups to demonstrate to the Examiner that the claims are of the same grouping.

In order to be responsive, Applicant hereby elects to prosecute Group III, Claims 1-14, but as stated above, makes the election with traverse. Applicant further requests a telephonic interview with the Examiner to discuss possible claims amendments to reintroduce Claims 15-22 to prosecution.

Information Disclosure Statement

Applicant submits that item 3 on page 2 should be omitted and that the pertinent statement in Section 1 is that Applicant knows of no prior art at this time. Therefore, Applicant submits that no references were intended to be filed with the application. The Office Action did not state what further action is required of Applicant. Therefore, Applicant awaits further guidance on the subject.

Claim Objections

The Office Action objected to Claims 1, 2, 7 and 13 due to several informalities. The Office Action suggests that in Claim 1, the phrase, “a thermally conductive sheet connected to each of the first and second surfaces” be changed to “ a thermally conductive sheet connected to the first surface and a thermally conductive sheet connected to the second surface.” In addition, Claim 1 should end with a period and not a semi-colon. In Claims 2 and 13, “the sheet” lacks antecedent basis. Claim 7 should end with a period.

Applicant has amended the aforementioned Claims to address the Claim objections.

Claim Rejections

35 U.S.C. §102

The Office Action rejected Claims 1, 4, 5 and 6 under 35 U.S.C. 102(b) as being anticipated by Taylor et al. (US Patent No. 6,125,636). Applicant respectfully traverses the rejection. The Taylor patent clearly recites the Peltier chip having a user facing surface 90 and an opposite surface 110 (col. 5 lines 11-26), which are clearly not thermally conductive

sheets as stated in the Office Action. The surfaces 90, 110 perhaps equate to Applicant's claimed first and second surfaces, but clearly not thermally conductive sheets. In fact, in the pertinent area of the specification and in the corresponding Figure 3, nothing resembling thermally conductive sheets are disclosed. Applicant also directs Examiner's attention to Applicant's Figures 3 and 3A which disclose planar conductive sheets as now clearly claimed in the amended claims.

Furthermore, with respect to the rejection of Claim 4, thermally conductive grease is not the same as thermal adhesive. Thermal grease does not cure and therefore is not suitable to fix Applicant's conductive sheets to the surfaces of the temperature element. Thermal adhesive as clearly claimed is used to permanently attach the conductive sheets to the temperature element. Therefore, the rejection of Claim 4 is also improper.

With respect to Claims 5 and 6, although these elements are similar to Applicant's claimed invention, they are claimed in dependent claims that depend from independent Claim 1 which has been structurally differentiated from the Taylor reference.

The Office Action further rejected Claims 1-3 under 35 U.S.C. 102(b) as being unpatentable over Klein (US Patent No. 4,930,317). Applicant respectfully points out that the use of the language unpatentable over usually follows a 35 U.S.C. 103(a) rejection. Applicant must assume that the Office Action meant to state that Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Klein. Applicant respectfully traverses the rejection. Klein's thermally conductive pad 130 is not a thermally conductive sheet. The pad 130 is a complex structure that includes several layers as clearly recited throughout Col. 7 of the specification. In addition, the complex structure includes the elements 132, 134 and 136 which are not temperature elements. 132 is a heat transfer substance such as a gel or liquid (col 7. Lines 8-12). 134 is thermally conductive single, laminated or braided sheets of metal, plastic, rubber, fabric or the like (Col. 7, lines 14-20). 136 are plastic layers

(Col. 7, lines 24-26). None of 132, 134, 136 even resemble a temperature element as recited in Claim 1, of which support in the specification can be found as active element that produces both heat and cold. In the preferred embodiment, the temperature element is a Peltier chip. In addition, the cover 38 is not clearly recited in the drawings. However, the pad 130 only includes one conductive plate 52 while Applicant's claimed invention discloses two surfaces for temperature conducting. Furthermore, the thermally insulating sheet is required to be located in between the two thermally conductive sheets, which is not possible in Klein. The cover 38 apparently surrounds the entire structure leaving no openings except for the single plate 52. Furthermore, Klein is not used for orthopaedic braces. Applicant has amended Claim 1 to further recite the novelty of Applicant's claimed invention.

35 U.S.C. §103

The Office Action rejected Claims 7-10 under 35 U.S.C. 103(a) as being unpatentable over Brunswick (US Patent No. 4,716,892). Applicant *strongly* traverses the rejection. Applicant generally points out that the Brunswick reference has nothing to do with the therapeutic delivery of heat and cold. While Brunswick does disclose an orthopaedic brace, the brace includes a pocket only to receive and hold a thermo forming plate used to be heated once not for therapeutic purposes but to be pliable so that it can be formed around a patient's body part for a secure custom fit. This disclosure is clearly recited throughout the entire specification, but see for example Col. 6, lines 33-68, col. 7 lines 1-33. Once the plate is heated, it is placed into the pocket where the heat is deliberately isolated from the patient. The plate is formed by a medical practitioner while it cools and it is not heated again. Applicant has amended the Claims in order to more clearly recite the non-obviousness of Applicant's claimed invention.

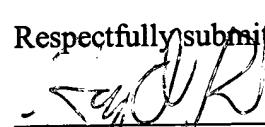
The Office Action rejected Claim 11 under 35 U.S.C. 103(a) as being unpatentable over Brunswick (US Patent No. 4,716,892) in view of Brink (US Patent No. 5,741,220). Applicant submits that the rejection is now moot since Claim 11 has been amended and is deemed now allowable.

The Office Action rejected Claim 11 under 35 U.S.C. 103(a) as being unpatentable over Brunswick (US Patent No. 4,716,892) in view of Goldsmith (US Patent No. 5,407,421) in view of Klein (US Patent No. 4,930,317). Applicant has addressed both the improper basis for both the Brunswick and Klein references. Furthermore, Applicant submits that there is absolutely no teaching or suggestion in Brunswick to add a therapeutic heating and cooling system. Furthermore, Klein provides no teaching or suggestion for incorporating its claimed system into an orthopaedic brace.

In general, Applicant requests a telephonic interview not only to discuss the possibility of reintroducing withdrawn claims as discussed above, but also to discuss the inapplicability of the Brunswick reference, if Examiner does not agree with Applicant's arguments. Applicant is confident that Examiner will agree with the inapplicability of the Brunswick reference as a basis of rejection.

If Examiner has any questions regarding this document, Applicant asks that Examiner contact the undersigned immediately by telephone.

Respectfully submitted,



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